

REMARKS

Overview

The Examiner responded in the prior Office Action as follows: rejected claims 66-104, 107-109, and 111-172 under 35 U.S.C. § 102(e) as being anticipated by Carroll et al. (U.S. Patent No. 6,285,757); and rejected claims 105-106 and 110 under 35 U.S.C. § 103(a) as being unpatentable over Carroll in view of Hoffberg et al. (U.S. Patent No. 6,418,424).

Applicants hereby amend claims 66, 79 and 83 in order to clarify the subject matter of their invention. Thus, claims 66-172 are now pending.

Discussion

The Examiner has rejected each of the previously pending claims as being unpatentable over Carroll, either alone or in combination with Hoffberg. However, each of the pending claims as rejected includes features and provides functionality not disclosed by Carroll or the other references, as discussed below, and thus is allowable over those references.

Carroll generally describes a portable “interface device” that is designed to be carried or worn by a user and to communicate with one or more other computing devices, with the disclosed embodiment being a wrist-mountable device similar to a wristwatch that includes a microphone and retractable earbud. The interface device is intended to act as an input/output device to support one or more other systems – for example, Carroll indicates that “[v]oice communication with a wearable personal computing device is the primary contemplated application”. (Carroll, 3:17-21, 26-28.)

Applicants’ described techniques are generally related to the use of a thin client, such as a portable computing device, and in particular to a system that uses the modeled state of the thin client in various ways. For example, in at least some embodiments a user characterization system executes on a computing system remote from the thin client in order to model a current state of the thin client and its user, and then uses the modeled current state information in various ways, such as to assist the user of the thin client.

Due to the fundamentally different purpose and uses of the Carroll system relative to Applicants’ claimed invention, the pending claims include various claim elements that are not

taught, suggested or motivated by Carroll, and the other cited references do not appear to address these failings of Carroll. For example, pending independent claim 122 as rejected recites the following:

A method in a computer for providing functionality to a remote thin client portable computing device based on a context related to the remote thin client that is modeled with multiple context attributes, the method comprising:
obtaining values of the context attributes from sources;
supplying the obtained values to clients having an interest in those values; and
repeatedly, in response to requests received from the remote thin client, providing functionality as requested based on values of the context attributes.

Thus, a computer that is remote from a thin client portable computing device performs the method, and in particular uses information about multiple context attributes modeling a context of the thin client device in order to repeatedly provide requested functionality to the remote thin client device.

The Examiner appears to assert that the interface device of Carroll is a thin client computing device, although Carroll makes no mention of thin client computing devices of any kind, and instead emphasizes the various capabilities that may be present in the interface device. For example, Carroll indicates the following:

Interface device 10 and its associated packaging is as comfortable as a wristwatch, yet effectively as powerful as at least a 180 MHz, 64 MB PC, for example, with advanced voice-recognition and interactive-communication and control features, via a wireless or other handshake link to wearable computer 190 or other computer 200. It is also contemplated that even greater processing power will be incorporated directly in interface device 10 as technology advances, such that interface device 10 will not be just for interfacing with another machine but will have completely independent processing power. . . . According to one embodiment, interface device 10 is itself a wearable personal computer with flexible circuitry between various components . . . Carroll, 8:28-47.

Moreover, even if it is assumed for the sake of argument that Carroll's interface device can act as a thin client computing device, Carroll makes no mention of several claim elements recited in claim 122, including the following: (A) modeling the context of the thin client device in any way, let alone with multiple context attributes; (B) that such modeling of the context of the thin client device be performed by a distinct computing device remote from the thin client device; and (C) that the modeled context attribute values be used by the remote computing

device to repeatedly provide requested functionality to the thin client device. Thus, for each of these reasons, claim 122 and its dependents are patentable over Carroll, as well as over the other cited references which appear to similarly lack any teaching or motivation that would correct these deficiencies of Carroll.

When rejecting claim 122 and its dependents, the Examiner merely points to the earlier rejection of independent method claim 83 and its dependents without further discussion, which reference operation of Carroll's interface device when using a proximity sensor to determine the distance of the device from the user's face so as to adjust the size of information displayed on the interface device. However, even if obtaining a reading from such a proximity sensor were to be construed as obtaining a value for one aspect of the state of the interface device, there is nothing in the Examiner's rejection (or more generally in Carroll) that is even remotely related to a distinct computing device remote from the thin client device that performs modeling of the thin client device context or that uses modeled context attribute values to repeatedly provide requested functionality to the thin client device, as well as that models the thin client device context with multiple context attributes. Moreover, Hoffberg and the other cited art similarly appear to lack any teaching or motivation to perform such functionality. Accordingly, claim 122 and its dependents are patentable over the cited prior art for at least these reasons.

In addition, the other independent claims 66, 83, 116, 119, 121, 139, 140, 141, 150 and 161 as previously rejected and amended each recite language similar to one or more of the previously discussed claim elements, and are similarly patentable for the reasons previously discussed, as well as for additional reasons based on their respective recited claim elements. For example, claim 66 as amended recites a "method for a user characterization system executing remotely from a thin client wearable computer to provide information about a current state of a user of the thin client wearable computer, the user characterization system modeling the current state with multiple state attributes", and including "receiving the sent values for the state attributes from the SSMs; automatically modeling values of other state attributes based at least in part on the sent values of the state attributes; . . . and interacting with the thin client wearable computer in order to provide information about the user or to receive information about the user, the interacting being based at least in part on the modeled other state attribute values". Neither Carroll nor the other cited prior art references provide a teaching or motivation for a user

characterization system generally, let alone a user characterization system that automatically models values of state attributes based on received values of other state attributes.

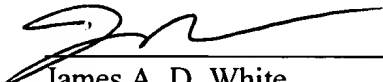
Furthermore, the pending dependent claims include the features of those claims from which they depend, and are thus allowable for the same reasons as those claims. Moreover, the pending dependent claims also recite additional features lacking in the cited references, and are thus allowable on the basis of those features as well. For example, claims 111-114 each recite the exchange of security information between the thin client and the computer performing the method for various purposes, but Carroll makes no mention of any such security information – the Applicants do not understand the Examiner’s rejection of these claims, which includes the following apparently unrelated portion of Carroll (“Speaker mechanism 90 also can include warning device 110, such as a vibrator or buzzer, for alerting the user of an incoming message, call, and/or other communication or activity optionally associated with a personal computer 200”, Carroll, 5:10-13). In addition, claim 76 recites that “the remote computer has an output device that is perceivable by the user of the thin client wearable computer, and wherein the performing of the processing based on the received values by at least one of the SCMs includes presenting information to the user on the output device” – Carroll makes no mention of presenting information to the user in any manner other than via the interface device, and the Examiner points only to the lensing display on the interface device when rejecting this claim. A variety of other dependent claims similarly recite additional claim elements that further render the claims patentable over the cited prior art references, but are not discussed in detail here for the sake of brevity.

Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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